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RAW SEQUENCE LISTING/   DATE: 03/12/2002
PATENT APPLICATION: US/09/848,967   TIME: 09:54:18

Input Set : N:\Crf3\RULE60\09848967.raw
Output Set: N:\CRF3\03122002\I848967.raw

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 1 <110> APPLICANT: CALENOFF, EMANUEL
 2        DITLOW, CHARLES C.
 3 <120> TITLE OF INVENTION: IMMUNOGENIC PEPTIDES AND USES THEREOF
 4 <130> FILE REFERENCE: 21417/92141
 5 <140> CURRENT APPLICATION NUMBER: 09/848,967
 6 <141> CURRENT FILING DATE: 2001-05-04
 8 <150> PRIOR APPLICATION NUMBER: 09/837,630
 9 <151> PRIOR FILING DATE: 2001-04-18
11 <160> NUMBER OF SEQ ID NOS: 32
12 <170> SOFTWARE: PatentIn Ver. 2.1
14 <210> SEQ ID NO: 1
15 <211> LENGTH: 260
16 <212> TYPE: PRT
17 <213> ORGANISM: Helicobacter pylori
18 <400> SEQUENCE: 1
19      Met Lys Thr Asn Gly His Phe Lys Asp Phe Ala Trp Lys Lys Cys Leu
20       1               5                  10                  15
21      Leu Gly Ala Ser Val Gly Ala Leu Leu Val Gly Cys Ser Pro His Ile
22                   20                  25                  30
23      Ile Glu Thr Asn Glu Val Ala Leu Lys Leu Asn Tyr His Pro Ala Ser
24                   35                  40                  45
25      Glu Lys Val Gln Ala Leu Asp Glu Lys Ile Leu Leu Leu Arg Pro Ala
26           50                  55                  60
27      Phe Gln Tyr Ser Asp Asn Ile Ala Lys Glu Tyr Glu Asn Lys Phe Lys
28       65                  70                  75                  80
29      Asn Gln Thr Val Leu Lys Val Glu Gln Ile Leu Gln Asn Gln Gly Tyr
30                        85                  90                  95
31      Lys Val Ile Asn Val Asp Ser Ser Asp Lys Asp Asp Phe Ser Phe Ala
32                   100                 105                 110
33      Gln Lys Lys Glu Gly Tyr Leu Ala Val Ala Met Asn Gly Glu Ile Val
34                   115                 120                 125
35      Leu Arg Pro Asp Pro Lys Arg Thr Ile Gln Lys Lys Ser Glu Pro Gly
36           130                 135                 140
37      Leu Leu Phe Ser Thr Gly Leu Asp Lys Met Glu Gly Val Leu Ile Pro
38      145                 150                 155                 160
39      Ala Gly Phe Val Lys Val Thr Ile Leu Glu Pro Met Ser Gly Glu Ser
40                   165                 170                 175
41      Leu Asp Ser Phe Thr Met Asp Leu Ser Glu Leu Asp Ile Gln Glu Lys
42                   180                 185                 190
43      Phe Leu Lys Thr Thr His Ser Ser His Ser Gly Gly Leu Val Ser Thr
44                   195                 200                 205
45      Met Val Lys Gly Thr Asp Asn Ser Asn Asp Ala Ile Lys Ser Ala Leu
46           210                 215                 220
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        47        Asn Lys Ile Phe Gly Ser Ile Met Gln Glu Ile Asp Lys Lys Leu Thr
        48        225                 230                 235                 240
        49        Gln Lys Asn Leu Glu Ser Tyr Gln Lys Asp Ala Lys Glu Leu Lys Gly
        50                        245                 250                 255
        51        Lys Arg Asn Arg
        52                        260
        54 <210> SEQ ID NO: 2
        55 <211> LENGTH: 28
        56 <212> TYPE: PRT
        57 <213> ORGANISM: Streptococcus pneumoniae
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        60 <222> LOCATION: (1)..(3)
        61 <223> OTHER INFORMATION: Variable amino acid
        62 <221> NAME/KEY: MOD_RES
        63 <222> LOCATION: (7)..(8)
        64 <223> OTHER INFORMATION: Variable amino acid
        65 <221> NAME/KEY: MOD_RES
        66 <222> LOCATION: (12)
        67 <223> OTHER INFORMATION: Variable amino acid
        68 <221> NAME/KEY: MOD_RES
        69 <222> LOCATION: (15)..(18)
        70 <223> OTHER INFORMATION: Variable amino acid
        71 <221> NAME/KEY: MOD_RES
        72 <222> LOCATION: (21)
        73 <223> OTHER INFORMATION: Variable amino acid
        74 <221> NAME/KEY: MOD_RES
        75 <222> LOCATION: (24)..(28)
        76 <223> OTHER INFORMATION: Variable amino acid
        77 <400> SEQUENCE: 2
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W--> 80         Xaa Xaa Asp Ala Xaa Glu Leu Xaa Xaa Xaa Xaa Xaa
        81                        20                  25
        83 <210> SEQ ID NO: 3
        84 <211> LENGTH: 28
        85 <212> TYPE: PRT
        86 <213> ORGANISM: Helicobacter pylori
        87 <400> SEQUENCE: 3
        88         Met Gln Glu Ile Asp Lys Lys Leu Thr Gln Lys Asn Leu Glu Ser Tyr
        89         1               5                   10                  15
        90         Gln Lys Asp Ala Lys Glu Leu Lys Gly Lys Arg Asn
        91                        20                  25
        93 <210> SEQ ID NO: 4
        94 <211> LENGTH: 28
        95 <212> TYPE: PRT
        96 <213> ORGANISM: Mycoplasma hominis
        97 <220> FEATURE:
        98 <221> NAME/KEY: MOD_RES
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 99 <222> LOCATION: (1)..(2)
100 <223> OTHER INFORMATION: Variable amino acid
101 <221> NAME/KEY: MOD_RES
102 <222> LOCATION: (5)
103 <223> OTHER INFORMATION: Variable amino acid
104 <221> NAME/KEY: MOD_RES
105 <222> LOCATION: (9)..(13)
106 <223> OTHER INFORMATION: Variable amino acid
107 <221> NAME/KEY: MOD_RES
108 <222> LOCATION: (16)..(17)
109 <223> OTHER INFORMATION: Variable amino acid
110 <221> NAME/KEY: MOD_RES
111 <222> LOCATION: (24)
112 <223> OTHER INFORMATION: Variable amino acid
113 <221> NAME/KEY: MOD_RES
114 <222> LOCATION: (26)
115 <223> OTHER INFORMATION: Variable amino acid
116 <400> SEQUENCE: 4
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W--> 117   Xaa Xaa Glu Ile Xaa Lys Lys Leu Xaa Xaa Xaa Xaa Xaa Glu Ser Xaa
     118   1   5   10   15
W--> 119   Xaa Lys Asp Ala Lys Glu Leu Xaa Gly Xaa Arg Asn
     120   20   25

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122 <210> SEQ ID NO: 5
123 <211> LENGTH: 12
124 <212> TYPE: PRT
125 <213> ORGANISM: Helicobacter pylori
126 <400> SEQUENCE: 5
127      Met Gln Glu Ile Asp Lys Lys Leu Thr Gln Lys Asn
128       1               5                  10
130 <210> SEQ ID NO: 6
131 <211> LENGTH: 10
132 <212> TYPE: PRT
133 <213> ORGANISM: Helicobacter pylori
134 <400> SEQUENCE: 6
135      Lys Asn Leu Glu Ser Tyr Gln Lys Asp Ala
136       1               5                  10
138 <210> SEQ ID NO: 7
139 <211> LENGTH: 12
140 <212> TYPE: PRT
141 <213> ORGANISM: Helicobacter pylori
142 <400> SEQUENCE: 7
143      Gln Lys Asp Ala Lys Glu Leu Lys Gly Lys Arg Asn
144       1               5                  10
146 <210> SEQ ID NO: 8
147 <211> LENGTH: 11
148 <212> TYPE: PRT
149 <213> ORGANISM: Helicobacter pylori
150 <400> SEQUENCE: 8
151      Leu Pro Ala Leu Lys Glu Asn Asn Gly Lys Val
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Input Set : N:\Crf3\RULE60\09848967.raw
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152            1              5                   10
154 <210> SEQ ID NO: 9
155 <211> LENGTH: 13
156 <212> TYPE: PRT
157 <213> ORGANISM: Helicobacter pylori
158 <400> SEQUENCE: 9
159      Val Thr Thr Lys Gly Glu Arg Thr Phe Glu Tyr Asn Asn
160            1              5                   10
162 <210> SEQ ID NO: 10
163 <211> LENGTH: 11
164 <212> TYPE: PRT
165 <213> ORGANISM: Helicobacter pylori
166 <400> SEQUENCE: 10
167      Leu Glu Gln Asn Glu Gly Phe Lys Arg Arg Val
168            1              5                   10
170 <210> SEQ ID NO: 11
171 <211> LENGTH: 12
172 <212> TYPE: PRT
173 <213> ORGANISM: Helicobacter pylori
174 <400> SEQUENCE: 11
175      Thr Val Asp Ala Ser Gly Lys Arg Ser Ile Ser Gly
176            1              5                   10
178 <210> SEQ ID NO: 12
179 <211> LENGTH: 12
180 <212> TYPE: PRT
181 <213> ORGANISM: Helicobacter pylori
182 <400> SEQUENCE: 12
183      Met Gln Glu Ile Asp Lys Lys Leu Thr Gln Lys Asn
184            1              5                   10
186 <210> SEQ ID NO: 13
187 <211> LENGTH: 10
188 <212> TYPE: PRT
189 <213> ORGANISM: Helicobacter pylori
190 <400> SEQUENCE: 13
191      Asn Thr Arg Tyr Asp Arg Trp Ala Lys Asp
192            1              5                   10
194 <210> SEQ ID NO: 14
195 <211> LENGTH: 15
196 <212> TYPE: PRT
197 <213> ORGANISM: Helicobacter pylori
198 <400> SEQUENCE: 14
199      Ile Asn Gly Asp Lys Arg Thr Gly Gly Lys Pro Asn Thr Pro Glu
200            1              5                   10                  15
202 <210> SEQ ID NO: 15
203 <211> LENGTH: 10
204 <212> TYPE: PRT
205 <213> ORGANISM: Helicobacter pylori
206 <400> SEQUENCE: 15
207      Ser Ser Ser Glu Tyr Glu Lys Leu Lys Ala
```

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208          1              5              10
210 <210> SEQ ID NO: 16
211 <211> LENGTH: 12
212 <212> TYPE: PRT
213 <213> ORGANISM: Helicobacter pylori
214 <400> SEQUENCE: 16
215      Lys Glu Gln Ile Ile Glu Ala Lys Gly Pro Asp Val
216          1              5              10
218 <210> SEQ ID NO: 17
219 <211> LENGTH: 10
220 <212> TYPE: PRT
221 <213> ORGANISM: Helicobacter pylori
222 <400> SEQUENCE: 17
223      Gln Gln Thr His Arg Lys Ile Asn Arg Pro
224          1              5              10
226 <210> SEQ ID NO: 18
227 <211> LENGTH: 10
228 <212> TYPE: PRT
229 <213> ORGANISM: Helicobacter pylori
230 <400> SEQUENCE: 18
231      Lys Gln Ala Glu Glu Ala Asn Lys Thr Pro
232          1              5              10
234 <210> SEQ ID NO: 19
235 <211> LENGTH: 10
236 <212> TYPE: PRT
237 <213> ORGANISM: Helicobacter pylori
238 <400> SEQUENCE: 19
239      Lys Thr Pro Asp Lys Pro Asp Lys Val Trp
240          1              5              10
242 <210> SEQ ID NO: 20
243 <211> LENGTH: 9
244 <212> TYPE: PRT
245 <213> ORGANISM: Homo sapiens
246 <400> SEQUENCE: 20
247      Gln Gly Gln Asp Val Arg Gln Pro Gly
248          1              5
250 <210> SEQ ID NO: 21
251 <211> LENGTH: 5
252 <212> TYPE: PRT
253 <213> ORGANISM: Homo sapiens
254 <400> SEQUENCE: 21
255      Gly Arg Asp Gly Glu
256          1              5
258 <210> SEQ ID NO: 22
259 <211> LENGTH: 10
260 <212> TYPE: PRT
261 <213> ORGANISM: Homo sapiens
262 <400> SEQUENCE: 22
263      Gly Gly Phe Asp Glu Lys Ala Gly Gly Ala
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VERIFICATION SUMMARY
PATENT APPLICATION: **US/09/848,967**

DATE: 03/12/2002
TIME: 09:54:19

Input Set : **N:\Crf3\RULE60\09848967.raw**
Output Set: **N:\CRF3\03122002\I848967.raw**

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L:117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:119 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
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